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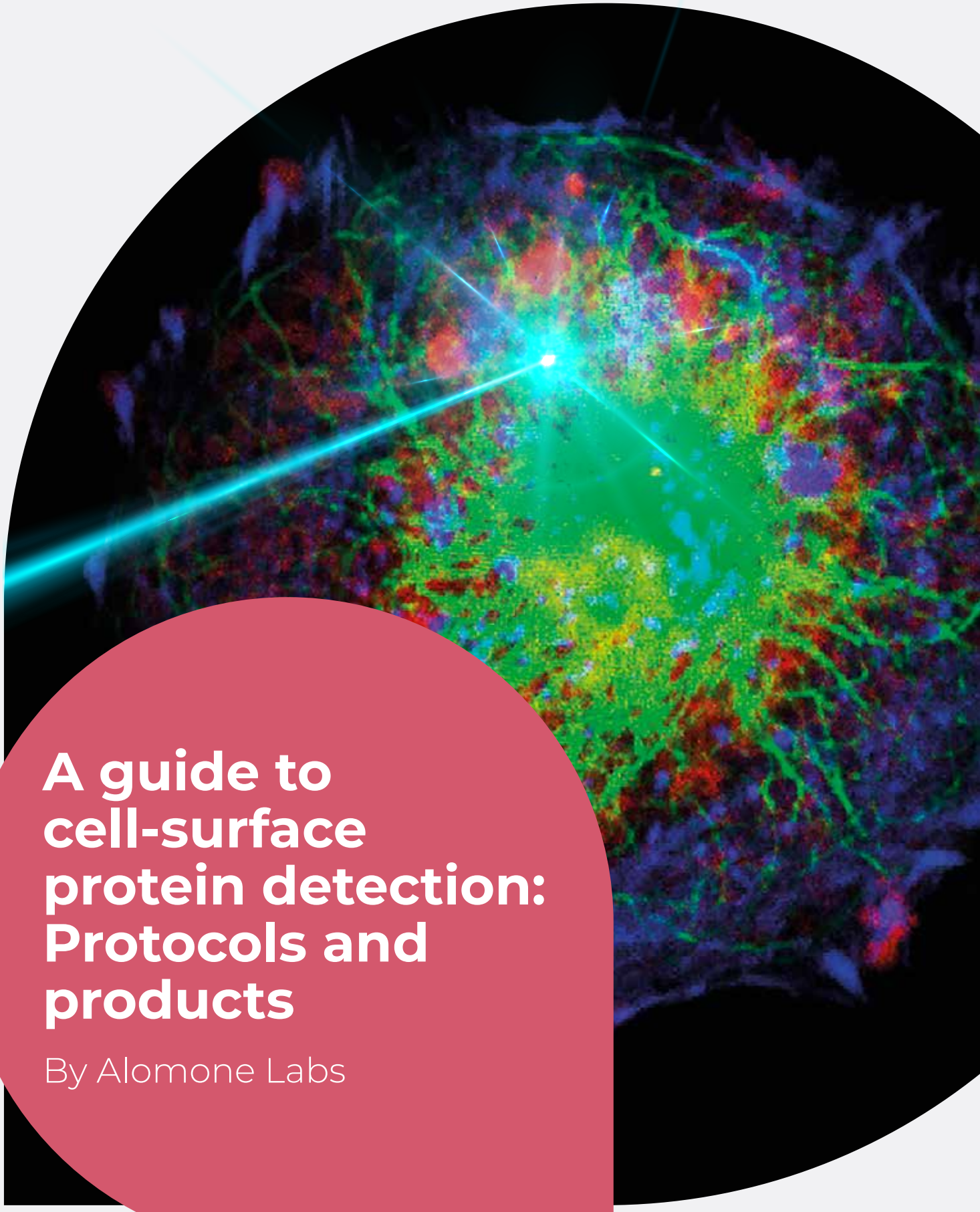
empowering the spirit of science

Live Cell Imaging Catalog



A guide to cell-surface protein detection: Protocols and products

By Alomone Labs

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Introduction

At Alomone Labs we have a diverse product portfolio that we have optimized specifically for use in flow cytometry (FACS) and live cell imaging. These reagents include directly conjugated and unconjugated antibodies, kits, labeled toxins and neurotrophins. Our products are developed entirely in-house and undergo rigorous QC with lot-specific testing. We focus on research tools for membrane proteins (ion channels, GPCRs, transporters) and cover neuroscience, pain & inflammation, cardiovascular, immunology, stem cells, metabolism, development and cancer research fields.

Live cell imaging products

Extracellular Antibodies

We have over 500+ products in our extracellular antibody range, to help you detect a wide range of key cell surface markers and membrane protein epitopes. They enable the rapid characterization of different cell lineages, and detect cell surface protein expression for your research needs. Immunocytochemistry (ICC) and flow cytometry (FACS) are the most common methods used with intact live cells, bypassing the need to fix and permeabilize your samples. We develop our extracellular antibodies to perform optimally in these applications. They have subsequently received multiple citations for use in leading peer-review publications.

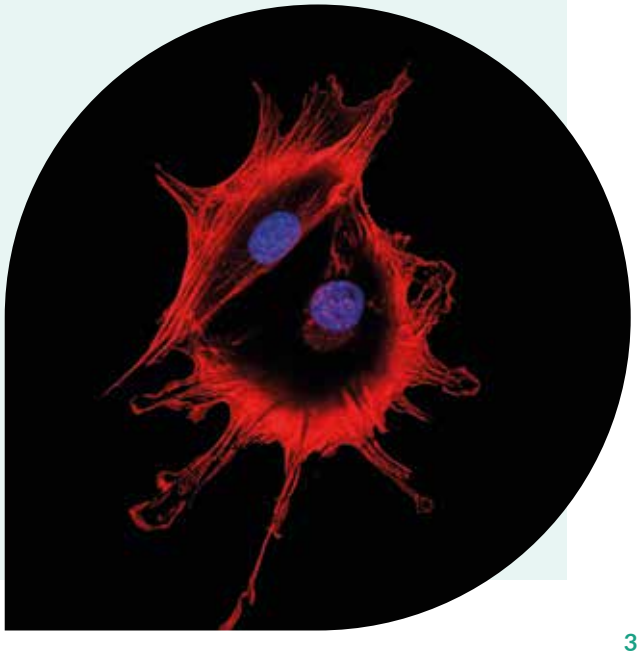
ICC using live cells with our extracellular antibodies can be used to detect protein expression, monitor cell movement, study protein transport and internalization. Common applications for flow cytometry (FACS) include their use to detect specific cell types in heterogenous cell populations.

Our extracellular antibody range is available in unconjugated and conjugated formats. Conjugate labels include ATTO dyes, Phycoerythrin (PE) and Fluorescein isothiocyanate (FITC). We also are pleased to offer a unique custom labelling service to our research customers.

Our FITC and PE conjugated extracellular antibodies have been optimized specifically for the best performance in flow cytometry (FACS).

Benefits of Alomone Labs FITC and PE conjugated Extracellular Antibodies:

- ✔ Optimised for flow cytometry (FACS)
- ✔ Tested with appropriate isotype control
- ✔ No need for secondary antibodies
- ✔ Cell-surface detection of proteins
- ✔ Permeabilization & cell fixation not required
- ✔ Time saving



Products:

Extracellular Antibodies Optimized for FACS

Name	Catalog #	Reactivity	Applications	Ab Type	Host	Epitope DM
Anti-5HT4 Receptor (HTR4) (EC)-FITC Ab	ASR-036-F	H, M, R	FC	Pc	Rb	2nd EC loop
Anti-Adenosine A2A Receptor (EC) Ab	AAR-008	M, R	IFC, WB	Pc	Rb	2nd EC loop
Anti-H Adenosine A2A Receptor (EC)-FITC Ab	AAR-007-F	H	FC	Pc	Rb	2nd EC loop
Anti-Adenosine A2B Receptor (EC)-FITC Ab	AAR-003-F	H, M	FC	Pc	Rb	2nd EC loop
Anti-Angiotensin II Receptor Type-1 (EC)-FITC Ab	AAR-011-F	H, M, R	FC	Pc	Rb	EC, N-T
Anti-Anoctamin-6 (EC)-FITC Ab	ACL-016-F	H, M, R	FC	Pc	Rb	2nd EC loop
Anti-ATP1B3 (EC) Ab	ANP-013	H, M, R	IFC, WB	Pc	Rb	EC, C-T
Anti-H ASCT2/SLC1A5 (EC) Ab	ANT-083	H	IFC, WB	Pc	Rb	2nd EC loop
Anti-BAI1 (EC)-FITC Ab	ABR-021-F	H, M, R	FC	Pc	Rb	EC, N-T
Anti-Bestrophin-1 (EC) Ab	ABC-001	H, M, R	IFC, IHC, WB	Pc	Rb	3rd EC loop
Anti-beta2-Adrenergic Receptor (EC)-FITC Ab	AAR-016-F	H, M	FC	Pc	Rb	EC, N-T
Anti-H C3aR (EC) Ab	AAR-031	H	IFC, WB	Pc	Rb	2nd EC loop
Anti-H C5aR1 (EC) Ab	AAR-032	H	IFC, WB	Pc	Rb	EC, N-T
Anti-Calcium Sensing Receptor (EC)-FITC Ab	ACR-004-F	H, M, R	FC	Pc	Rb	EC, N-T
Anti-Cannabinoid Receptor 1 (EC)-FITC Ab	ACR-001-F	H, M, R	FC	Pc	Rb	EC, N-T
Anti-H CCR2 (EC) Ab	ACR-022	H	IFC, WB	Pc	Rb	EC, N-T
Anti-CD39 (EC)-FITC Ab	ANT-065-F	H, M	FC	Pc	Rb	EC loop
Anti-CD73 (EC) Ab	ANT-066	H, M, R	IFC, IF, IHC, WB	Pc	Rb	EC, N-T
Anti-H CD97/ADGRE5 (EC) Ab	AER-055	H	IFC, WB	Pc	Rb	EC, N-T
Anti-CRF1 (CRHR1) (EC)-FITC Ab	ACR-050-F	H, M, R	FC	Pc	Rb	EC, N-T
Anti-CRTH2/GPR44 (EC) Ab	APR-062	M, R	IFC, IF, IHC, WB	Pc	Rb	3rd EC loop
Anti-H CX3CR1 (EC) Ab	ACR-059	H	IFC, WB	Pc	Rb	EC, N-T
Anti-CXCR4 (EC) Ab	ACR-014	H, M, R	ICC, IF, IHC, IFC, WB	Pc	Rb	EC, N-T
Anti-CysLTR1 (EC)-FITC Ab	ALR-003-F	H, M	FC	Pc	Rb	3rd EC loop
Anti-D2 Dopamine Receptor (EC)-FITC Ab	ADR-002-F	H, M, R	FC	Pc	Rb	EC, N-T
Anti-Dopamine Transporter (DAT) (EC)-FITC Ab	AMT-003-F	M, R	FC	Pc	Rb	2nd EC loop
Anti-EAAT1 (GLAST) (EC)-FITC Ab	AGC-021-F	H, M, R	FC	Pc	Rb	2nd EC loop
Anti-EMR1 (ADGRE1) (EC)-FITC Ab	AER-051-F	H, M, R	FC	Pc	Rb	EC, N-T
Anti-Ephrin-A2 (EC) Ab	AER-032	H, M, R	IFC, IF, IHC, WB	Pc	Rb	EC
Anti-Ghrelin Receptor (GHSR) (EC)-FITC Ab	AGR-031-F	H, M, R	FC	Pc	Rb	2nd EC loop
Anti-GLP1R (EC)-FITC Ab	AGR-021-F	H, M, R	FC	Pc	Rb	2nd EC loop
Anti-GLUT1 (EC)-FITC Ab	AGT-041-F	H, M, R	FC	Pc	Rb	1st EC loop
Anti-GLUT3 (EC)-FITC Ab	AGT-023-F	M, R	FC	Pc	Rb	1st EC loop
Anti-H GLUT3 (EC)-FITC Ab	AGT-043-F	H	FC	Pc	Rb	1st EC loop

Name	Catalog #	Reactivity	Applications	Ab Type	Host	Epitope DM
Anti-GPER1/GPR30 (EC) Ab	AER-049	H, M, R	IFC, WB	Pc	Rb	3rd EC loop
Anti-GPR120/FFAR4 (EC)-FITC Ab	AFR-014-F	H, M, R	FC	Pc	Rb	EC, N-T
Anti-GPR34 (EC)-FITC Ab	AGR-055-F	H, M, R	FC	Pc	Rb	2nd EC loop
Anti-GPR37 (EC) Ab	AGR-049	H, M, R	IFC, WB	Pc	Rb	EC, N-T
Anti-GPR4 (EC) Ab	AGR-041	H, M, R	IFC, WB	Pc	Rb	2nd EC loop
Anti-H GPR43/FFAR2 (EC) Ab	AFR-015	H	IFC, WB	Pc	Rb	2nd EC loop
Anti-GPR55 (EC) Ab	ACR-062	M, R	IFC, WB	Pc	Rb	3rd EC loop
Anti-GPR56 (EC)-FITC Ab	AGR-047-F	H, M, R	FC	Pc	Rb	EC, N-T
Anti-GPR65 (TDAG8) (EC)-FITC Ab	AGR-043-F	H, M, R	FC	Pc	Rb	1st EC loop
Anti-GPR65 (TDAG8) (EC)-PE Ab	AGR-043-PE	H, M, R	FC	Pc	Rb	1st EC loop.
Anti-GPR68 (OGR1) (EC)-FITC Ab	AGR-042-F	H, M, R	FC	Pc	Rb	2nd EC loop
Anti-GPR83 (EC) Ab	AGR-053	H, M, R	IFC, WB	Pc	Rb	EC, N-T
Anti-GPR84 (EC)-FITC Ab	AGR-052-F	H, M, R	FC	Pc	Rb	2nd EC loop
Anti-GPR91 (SUCNR1) (EC)-FITC Ab	ASR-090-F	H, M, R	FC	Pc	Rb	3rd EC loop
Anti-Histamine H2 Receptor (HRH2) (EC) Ab	AHR-002	M, R	ICC, IF, IFC, IHC, WB	Pc	Rb	2nd EC loop
Anti-H Histamine H4 Receptor (HRH4) (EC) Ab	AHR-004	H	IFC, WB	Pc	Rb	1st EC loop
Anti-IGF1R (EC) Ab	ANT-045	H, M, R	IFC, IHC, WB	Pc	Rb	EC, N-T (β chain)
Anti-KCNH2 (HERG) (EC)-FITC Ab	APC-109-F	H, R	FC	Pc	Rb	EC, between S1 and S2 DMs.
Anti-Kir2.1/KCNJ2 (EC)-FITC Ab	APC-159-F	H, M, R	FC	Pc	Rb	EC loop
Anti-Kir7.1 (EC) Ab	APC-125	H, M, R	IFC, IHC, WB	Pc	Rb	EC loop
Anti-Kv1.3 (KCNA3) (EC)-PE Ab	APC-101-PE	H, M, R	FC	Pc	Rb	1st EC loop
Anti-LPAR2 (EDG4) (EC)-FITC Ab	ALR-032-F	H, M, R	FC	Pc	Rb	EC, N-T
Anti-LRRC8A (EC) Ab	AAC-001	H, M, R	IF, IFC, IHC, WB	Pc	Rb	1st EC loop
Anti-Lynx1 (EC) Ab	ANC-021	H, M, R	IFC, IF, IHC, WB	Pc	Rb	EC, N-T
Anti-MCT1 (SLC16A1) (EC)-FITC Ab	AMT-011-F	H, M, R	FC	Pc	Rb	6th EC loop
Anti-mGluR5 (EC)-FITC Ab	AGC-007-F	M, R	FC	Pc	Rb	EC, N-T
Anti-mu-Opioid Receptor (OPRM1) (EC)-FITC Ab	AOR-011-F	H, M, R	FC	Pc	Rb	EC, N-T
Anti-nACh Receptor alpha7 (CHRNA7) (EC)-FITC Ab	ANC-007-F	H, M, R	FC	Pc	Rb	EC, N-T
Anti-Nectin-2/PVRL2 (EC) Ab	ANR-052	H, M, R	IFC, IF, IHC, WB	Pc	Rb	EC, N-T
Anti-Nectin-3/PVRL3 (EC) Ab	ANR-053	H, M, R	IFC, IF, IHC, WB	Pc	Rb	EC, N-T
Anti-Neurokinin 1 Receptor (NK1R) (EC)-FITC Ab	ATR-001-F	H, M, R	FC	Pc	Rb	2nd EC loop
Anti-Neuropilin-2 (NRP2) (EC)-FITC Ab	ANR-062-F	H, M, R	FC	Pc	Rb	EC, N-T
Anti-NIPAL4 (EC) Ab	ANT-144	H, M, R	IFC, WB	Pc	Rb	2nd EC loop
Anti-Nogo Receptor (EC)-FITC Ab	ANT-008-F	H, M, R	FC	Pc	Rb	EC
Anti-H Orai1 (EC)-FITC Ab	ACC-060-F	H	FC	Pc	Rb	2nd EC loop

Name	Catalog #	Reactivity	Applications	Ab Type	Host	Epitope DM
Anti-P2X1 Receptor (EC)-FITC Ab	APR-022-F	H, M, R	FC	Pc	Rb	EC loop
Anti-P2X4 Receptor (EC)-FITC Ab	APR-024-F	H, M, R	FC	Pc	Rb	EC
Anti-P2X7 Receptor (EC)-PE Ab	APR-008-PE	H, M, R	FC	Pc	Rb	EC loop
Anti-P2Y12 Receptor (EC)-FITC Ab	APR-020-F	H	FC	Pc	Rb	3rd EC loop
Anti-P2Y12 Receptor (EC)-PE Ab	APR-020-PE	H, M, R	FC	Pc	Rb	3rd EC loop
Anti-P2Y2 Receptor (EC)-FITC Ab	APR-102-F	H, M, R	FC	Pc	Rb	EC, C-T
Anti-P2Y6 Receptor (EC)-FITC Ab	APR-106-F	H, M, R	FC	Pc	Rb	2nd EC loop
Anti-p75 NGF Receptor (EC)-FITC Ab	ANT-007-F	H, M, R	FC	Pc	Rb	EC, stalk DM
Anti-H PAR1 (F2R) (EC)-FITC Ab	APR-031-F	H	FC	Pc	Rb	EC, N-T
Anti-H PAR2/F2RL1 (EC) Ab	APR-035	H	IFC, WB	Pc	Rb	EC, N-T
Anti-PAR4 (F2RL3) (EC)-FITC Ab	APR-034-F	H, M, R	FC	Pc	Rb	Cys 149 sub to Ser 1st EC loop
Anti-Plexin-A1 (EC)-FITC Ab	APR-081-F	H, M, R	FC	Pc	Rb	EC, N-T
Anti-Plexin-A3 (EC) Ab	APR-093	H, M, R	IFC, IF, IHC, WB	Pc	Rb	EC, N-T
Anti-Prostacyclin Receptor (PTGIR) (EC) Ab	APR-068	H, M, R	IFC, WB	Pc	Rb	3rd EC loop
Anti-Prostaglandin E Receptor EP1 (PTGER1) (EC)-FITC Ab	APR-063-F	H, M, R	FC	Pc	Rb	3rd EC loop
Anti-Prostaglandin E Receptor EP2/ PTGER2 (EC)-FITC Ab	APR-064-F	H, M, R	FC	Pc	Rb	3rd EC loop
Anti-Robo1 (EC) Ab	ANR-181	H, M, R	IFC, WB	Pc	Rb	EC, N-T
Anti-S1PR1 (EDG1) (EC)-FITC Ab	ASR-011-F	H, M, R	FC	Pc	Rb	EC, N-T
Anti-S1PR3 (EDG3) (EC)-FITC Ab	ASR-013-F	H, M, R	FC	Pc	Rb	EC, N-T
Anti-Semaphorin 4D (SEMA4D) (EC)-FITC Ab	ASR-064-F	H, M, R	FC	Pc	Rb	EC, N-T
Anti-Serotonin Transporter (SERT) (EC)-FITC Ab	AMT-004-F	H, M, R	FC	Pc	Rb	4th EC loop
Anti-SLC11A1/NRAMP1 (EC) Ab	ANT-201	H, M, R	IFC, WB	Pc	Rb	4th EC loop
Anti-SLC7A2 (EC)-FITC Ab	ANT-103-F	H, M, R	FC	Pc	Rb	2nd EC loop
Anti-Sortilin (EC)-FITC Ab	ANT-009-F	H, M, R	FC	Pc	Rb	EC DM
Anti-SVCT2/SLC23A2 (EC) Ab	AST-022	H, M, R	IF, IHC, IFC, WB	Pc	Rb	2nd EC loop
Anti-H TNF Receptor I (EC) Ab	ANT-041	H	IFC, WB	Pc	Rb	EC, N-T
Anti-TREM2 (EC)-FITC Ab	ANR-018-F	H, M, R	FC	Pc	Rb	EC, N-T
Anti-TrkA (EC)-FITC Ab	ANT-018-F	H, M, R	FC	Pc	Rb	EC, N-T
Anti-TrkB (EC)-FITC Ab	ANT-019-F	H, M, R	FC	Pc	Rb	EC, N-T
Anti-TRPM2 (EC) Ab	ACC-128	H, M, R	IHC, WB, IFC	Pc	Rb	3rd EC loop
Anti-TRPV2 (VRL1) (EC)-FITC Ab	ACC-039-F	M, R	FC	Pc	Rb	1st EC loop
Anti-TRPV4 (EC)-FITC Ab	ACC-124-F	H, M, R	FC	Pc	Rb	3rd EC loop
Anti-VPAC1 (VIPR1) (EC)-FITC Ab	AVR-001-F	H, M, R	FC	Pc	Rb	EC, N-T
Anti-xCT/SLC7A11 (EC)-FITC Ab	ANT-111-F	H, M, R	FC	Pc	Rb	3rd EC loop
Anti-ZIP6/SLC39A6 (EC) Ab	AZT-006	H, M, R	IFC, WB	Pc	Rb	EC, N-T
Anti-ZIP8 (SLC39A8) (EC)-FITC Ab	AZT-008-F	H, M, R	FC	Pc	Rb	2nd EC loop
M Anti-KCNN4 (KCa3.1, SK4) (EC)-FITC Ab	ALM-051-F	H, M, R	FC	Mc	M	
M Anti-R p75 NGF Receptor (EC)-FITC Ab	AN-170-F	R	FC	Mc	M	

Products:

Extracellular Antibodies Optimized for FACS and ICC

Name	Catalog #	Reactivity	Applications	Ab Type	Host	Epitope DM
Anti-Orai1 (EC) Ab	ACC-062	M, R	ICC, IF, IFC, IHC, LCI, WB	Pc	Rb	2nd EC loop
Anti-H CXCR5 (EC) Ab	ACR-015	H	ICC, IF, IFC, LCI, WB	Pc	Rb	EC, N-T
Anti-EphA1 (EC) Ab	AER-011	H, M, R	ICC, IF, IFC, LCI, WB	Pc	Rb	EC, N-T
Anti-EphB1 (EC) Ab	AER-021	H, M, R	ICC, IF, IFC, LCI, WB	Pc	Rb	EC, N-T
M Anti-H Orai1 (EC) Ab	ALM-025	H	ICC, IF, IFC, LCI, WB	Mc	M	
Anti-Serotonin Transporter (SERT) (EC) Ab	AMT-004	H, M, R	ICC, IF, IFC, IHC, LCI, WB	Pc	Rb	4th EC loop
Anti-nACh Receptor alpha7 (CHRNA7) (EC) Ab	ANC-007	H, M, R	ICC, IF, IFC, IHC, LCI, WB	Pc	Rb	EC, N-T
Anti-Nectin-1/PVRL1 (EC) Ab	ANR-051	H, M, R	ICC, IF, IFC, IHC, LCI, WB	Pc	Rb	EC, N-T
Anti-p75 NGF Receptor (EC) Ab	ANT-007	H, M, R	ICC, IF, IFC, IHC, IP, LCI, WB	Pc	Rb	EC, stalk DM
Anti-TrkA (EC) Ab	ANT-018	H, M, R	ICC, IF, IFC, IHC, LCI, WB	Pc	Rb	2nd EC im-munoglobu-lin-like DM
Anti-TrkB (EC) Ab	ANT-019	H, M, R	ICC, IF, IFC, IHC, LCI, WB	Pc	Rb	EC DM
Anti-Ret (EC) Ab	ANT-025	H, M, R	ICC, IF, IFC, IHC, LCI, WB	Pc	Rb	EC, N-T
Anti-Kv1.3 (KCNA3) (EC) Ab	APC-101	H, M, R	ICC, IF, IFC, IHC, IP, LCI, WB	Pc	Rb	EC loop between DMs S1 and S2.
Anti-Kv1.3 (KCNA3) (EC)-FITC Ab	APC-101-F	H, M, R	FC, ICC, IF, LCI	Pc	Rb	EC loop be-tween DMs S1 and S2
Anti-P2X7 Receptor (EC) Ab	APR-008	H, M, R	ICC, IF, IFC, IHC, LCI, WB	Pc	Rb	EC loop
Anti-P2X7 Receptor (EC)-FITC Ab	APR-008-F	H, M, R	FC, ICC, IF, LCI	Pc	Rb	EC loop
Anti-P2Y12 Receptor (EC) Ab	APR-020	H, R	ICC, IF, IFC, LCI, WB	Pc	Rb	3rd EC loop
Anti-H ZACN (EC) Ab	AZC-001	H	ICC, IF, IFC, LCI, WB	Pc	Rb	EC, N-T

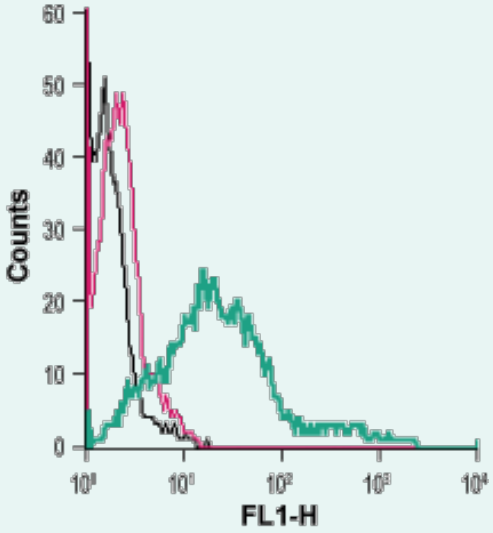
Visit www.alomone.com to view our full range of 500+ extracellular antibodies

Product Highlight: Neurotransmission

In neuroscience fields, membrane expressed receptors, ion channels and transporters are commonly used to differentiate between types of neurotransmission. We have an expansive, highly-characterized portfolio in this area. For example, the presence of the serotonin transporter - SERT/5-HTT, for serotonergic neurons was detected in FACS and ICC using our Anti-Serotonin Transporter (SERT) (extracellular) Antibody available in unconjugated (#AMT-004) and FITC conjugated format (#AMT-004-F).

Anti-Serotonin Transporter (SERT) (extracellular) FITC-Antibody (#AMT-004-F)

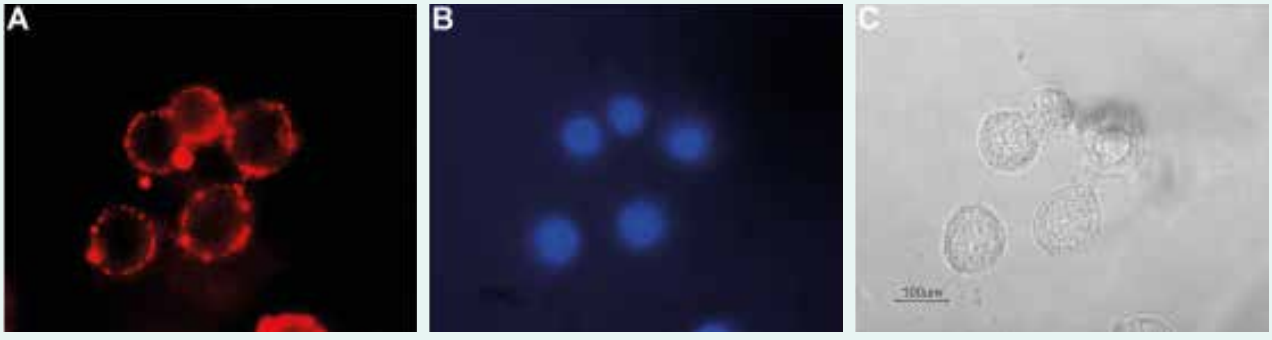
Direct Flow Cytometry (FACS) for Cell Surface Detection of SERT



Cell surface detection of SERT in live intact human MEG-01 megakaryoblastic leukemia cells:

- Cells.
- Cells + rabbit IgG isotype control-FITC.
- Cells + Anti-Serotonin Transporter (SERT) (extracellular)-FITC Antibody (#AMT-004-F).

Anti-Serotonin Transporter (SERT) (extracellular) Antibody (#AMT-004)



Expression of SERT in Living Rat PC12 Cells

Immunocytochemical staining of live intact rat pheochromocytoma PC12 cells. **A.** Cells were stained with Anti-Serotonin Transporter (SERT) (extracellular) Antibody (#AMT-004), (1:100), followed by goat anti-rabbit-AlexaFluor-594 secondary antibody (red). **B.** Cell nuclei were visualized using Hoechst 33342 (blue). **C.** Live view of the cells.

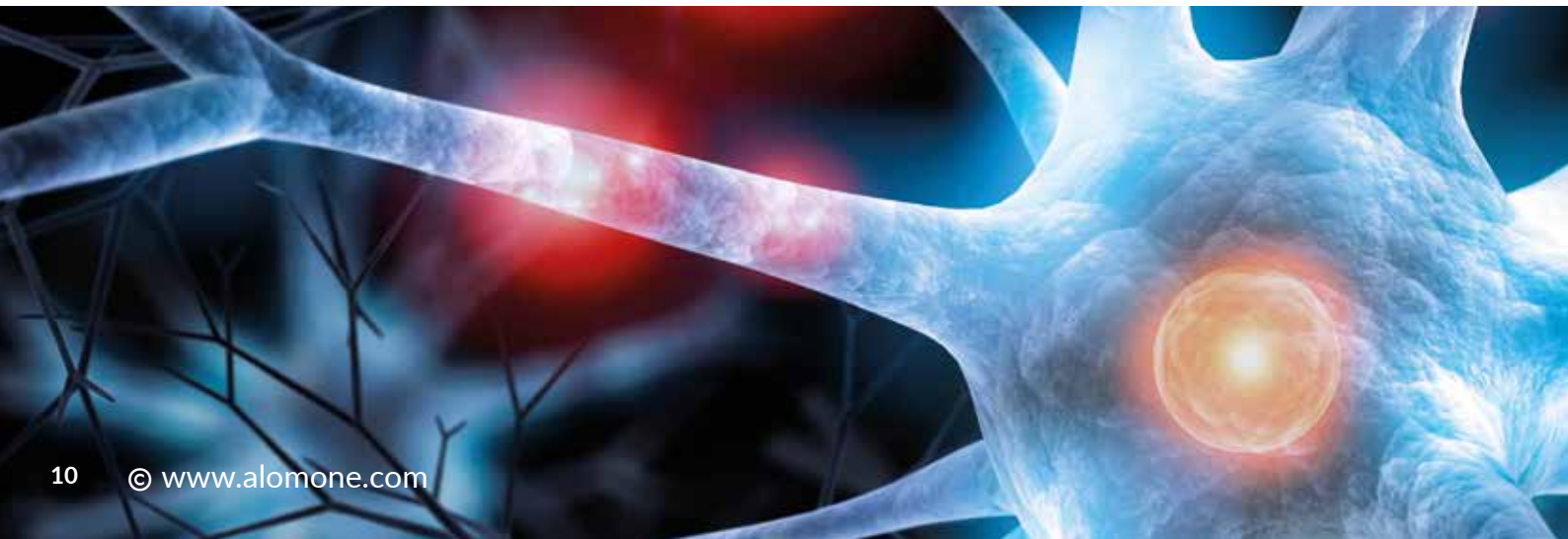
Products:

Extracellular Antibodies Optimized for ICC

Name	Catalog #	Reactivity	Applications	Ab Type	Host	Epitope DM
Anti-Adenylate Cyclase 3 (AC3) (EC)-ATTO Fluor-488 Ab	AAR-043-AG	H, M, R	ICC, IF, IHC, LCI, WB	Pc	Rb	3rd EC loop
Anti-CD56/NCAM1 (EC) Ab	ANR-041	H, M, R	ICC, IF, IHC, LCI, WB	Pc	Rb	EC, N-T
Anti-Choline Transporter (SLC5A7) (EC) Ab	ACT-001	H, M, R	ICC, IF, IHC, LCI, WB	Pc	Rb	4th EC loop
Anti-Dopamine Transporter (DAT) (EC) Ab	AMT-003	M, R	ICC, IF, IHC, LCI, WB	Pc	Rb	2nd EC loop
Anti-EAAT2 (GLT-1) (EC) Ab	AGC-022	H, M, R	ICC, IF, IHC, LCI, WB	Pc	Rb	2nd EC loop
Anti-EMR1 (ADGRE1) (EC) Ab	AER-051	H, M, R	ICC, IF, LCI, WB	Pc	Rb	EC, N-T
Anti-GABA(A) alpha1 Receptor (EC)-ATTO Fluor-488 Ab	AGA-001-AG	M, R	ICC, IF, IHC, LCI, WB	Pc	Rb	EC, N-T
Anti-GABA(A) epsilon Receptor (EC)-ATTO Fluor-633 Ab	AGA-015-FR	H, M, R	ICC, IF, IHC, LCI, WB	Pc	Rb	EC, N-T
Anti-GABA(A) gamma2 Receptor (EC) Ab	AGA-005	H, M, R	ICC, IF, IHC, LCI, WB	Pc	Rb	EC, N-T
Anti-GFR alpha 1 (EC) Ab	ANT-021	H, M, R	ICC, IF, IHC, LCI, WB	Pc	Rb	EC DM
Anti-GluR1 (GluA1) (EC)-ATTO Fluor-594 Ab	AGC-004-AR	H, M, R	ICC, IF, IHC, LCI, WB	Pc	Rb	EC, N-T
GP Anti-GluR1 (GluA1) (EC) Ab	AGP-009	H, M, R	ICC, IF, IHC, LCI, WB	Pc	GP	EC, N-T
GP Anti-GluR2 (GluA2) (EC) Ab	AGP-073	M, R	ICC, IF, LCI, WB	Pc	GP	EC, N-T
Anti-GluR3 (GluA3) (EC) Ab	AGC-010	H, M, R	ICC, IF, IHC, IP, LCI, WB	Pc	Rb	EC, N-T
Anti-GRID1 (EC) Ab	AGC-038	H, M, R	ICC, IF, IHC, LCI, WB	Pc	Rb	EC, N-T
Anti-GRID2 (EC) Ab	AGC-039	H, M, R	ICC, IF, IHC, LCI, WB	Pc	Rb	EC, N-T
Anti-Kir4.1 (KCNJ10) (EC) Ab	APC-165	H, M, R	ICC, IF, IHC, LCI, WB	Pc	Rb	EC loop
Anti-mGluR3 (EC) Ab	AGC-012	M, R	ICC, IF, IHC, LCI, WB	Pc	Rb	EC, N-T
Anti-nACh Receptor alpha6 (CHRNA6) (EC) Ab	ANC-006	M, R	ICC, IF, IHC, LCI, WB	Pc	Rb	EC, N-T
Anti-nACh Receptor beta2 (CHRNB2) (EC)-ATTO Fluor-594 Ab	ANC-012-AR	H, M, R	ICC, IF, IHC, LCI, WB	Pc	Rb	EC, N-T
Anti-nACh Receptor beta4 (CHRNB4) (EC)-ATTO Fluor-594 Ab	ANC-014-AR	H, M, R	ICC, IF, IHC, LCI, WB	Pc	Rb	EC, N-T
Anti-NALCN/VGCNL1 (EC) Ab	ASC-022	H, M, R	ICC, IF, IHC, LCI, WB	Pc	Rb	EC, S1-S2 DM III.
Anti-Neurexin 1alpha (EC) Ab	ANR-031	H, M, R	ICC, IF, LCI, WB	Pc	Rb	EC, N-T
Anti-Neuroligin 1 (EC) Ab	ANR-035	M, R	ICC, IF, IHC, LCI, WB	Pc	Rb	EC, N-T
Anti-Neuropilin-1 (NRP1) (EC) Ab	ANR-063	H, M, R	ICC, IF, LCI, WB	Pc	Rb	EC, N-T
Anti-NKCC1 (SLC12A2) (EC) Ab	ANT-071	H, M, R	ICC, IF, IHC, LCI, WB	Pc	Rb	6th EC loop

Name	Catalog #	Reactivity	Applications	Ab Type	Host	Epitope DM
Anti-NMDAR1 (GluN1) (EC) Ab	AGC-001	H, M, R	ICC, IF, IHC, LCI, WB	Pc	Rb	EC, N-T
Anti-NMDAR2A (GluN2A) (EC) Ab	AGC-002	H, M, R	ICC, IF, IHC, IP, LCI, WB	Pc	Rb	EC, N-T
Anti-NMDAR2B (GluN2B) (EC) Ab	AGC-003	H, M, R	ICC, IF, IHC, IP, LCI, WB	Pc	Rb	EC, N-T
Anti-Noradrenaline Transporter (NET) (EC) Ab	AMT-002	M, R	ICC, IF, IHC, LCI, WB	Pc	Rb	2nd EC loop
Anti-P2X2 Receptor (EC) Ab	APR-025	M, R	ICC, IF, LCI, WB	Pc	Rb	EC
Anti-P2X3 Receptor (EC) Ab	APR-026	M, R	ICC, IF, IHC, LCI, WB	Pc	Rb	EC
GP Anti-P2Y12 Receptor (EC) Ab	AGP-098	H, M, R	ICC, IF, LCI, WB	Pc	GP	3rd EC loop
Anti-SLC4A4 (NBC1) (EC) Ab	ANT-075	M, R	ICC, IF, IHC, LCI, WB	Pc	Rb	2nd EC loop, 10 TM topology.
Anti-TROY (TNFRSF19) (EC) Ab	ANT-033	H, M, R	ICC, IF, LCI, WB	Pc	Rb	EC, N-T
Anti-TRPA1 (EC) Ab	ACC-037	H, M, R	ICC, IF, IHC, IP, LCI, WB	Pc	Rb	1st EC loop
Anti-TRPC1 (EC) Ab	ACC-118	H, M, R	ICC, IF, LCI, WB	Pc	Rb	2nd EC loop
Anti-TRPC6 (EC) Ab	ACC-120	H, M, R	ICC, IF, IHC, LCI, WB	Pc	Rb	2nd EC loop
Anti-TRPM8 (EC) Ab	ACC-049	H, M, R	ICC, IF, IHC, IP, LCI,N, WB	Pc	Rb	3rd EC loop
Anti-R TRPV1 (VR1) (EC)-ATTO Fluor-488 Ab	ACC-029-AG	R	ICC, IF, IHC, LCI, WB	Pc	Rb	3rd EC loop
Anti-TRPV3 (EC)-ATTO Fluor-633 Ab	ACC-033-FR	M,R	ICC, IF, IHC, LCI, WB	Pc	GP	1st EC loop
Anti-TRPV3 (EC) Ab	ACC-033	H, M, R	ICC, IF, IHC, LCI, WB	Pc	Rb	1st EC loop
Anti-TRPV4 (EC) Ab	ACC-124	H, R	ICC, IF, IHC, LCI, WB	Pc	Rb	3rd EC loop
Anti-H TRPV6 (EC) Ab	ACC-028	H	ICC, IF, LCI, WB	Pc	Rb	1st EC loop

Visit www.alomone.com to view our full range of 500+ extracellular antibodies



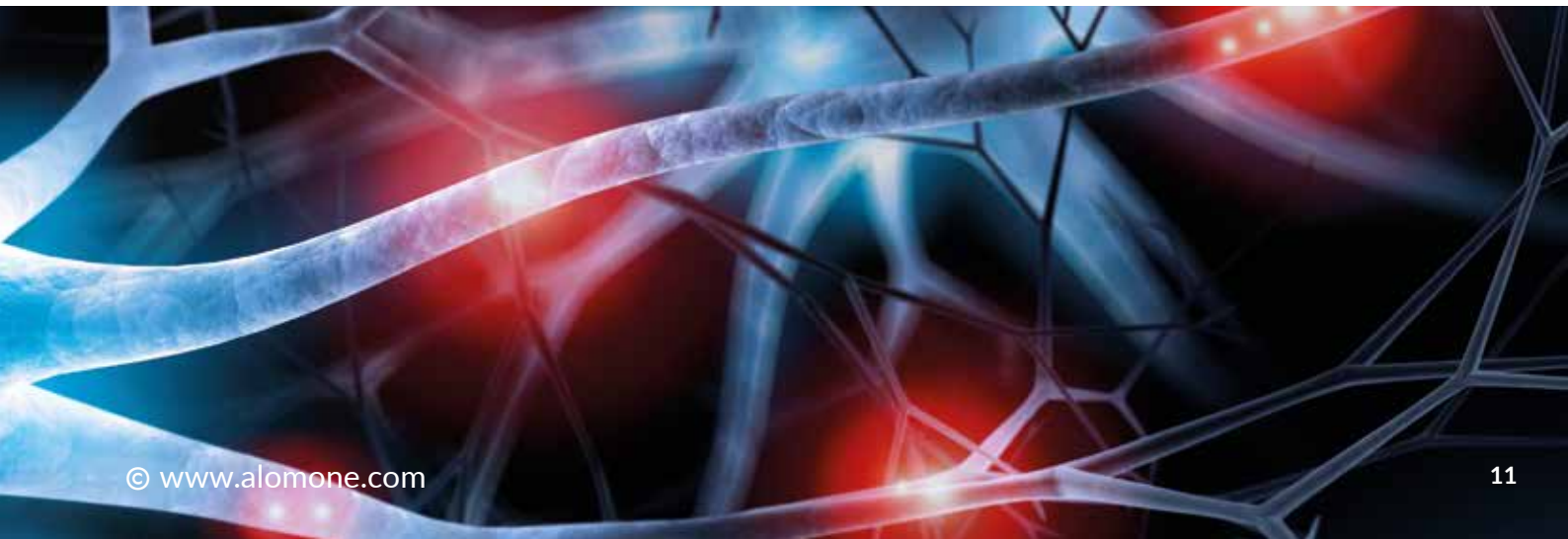
Labeled Toxins

For the ion channel community, we offer a number of toxins labeled with ATTO or FITC fluorescent dyes. These are an ideal tool to directly label cells expressing a channel of interest. They are tested with bioassays in-house to ensure there is no loss of activity observed versus their non-labeled equivalents. Our product range includes toxins that bind to GABA(A) Receptors and nAChRs. In addition, inward rectifier K^+ channel blockers and voltage-gated K^+ channel blockers.

Products:

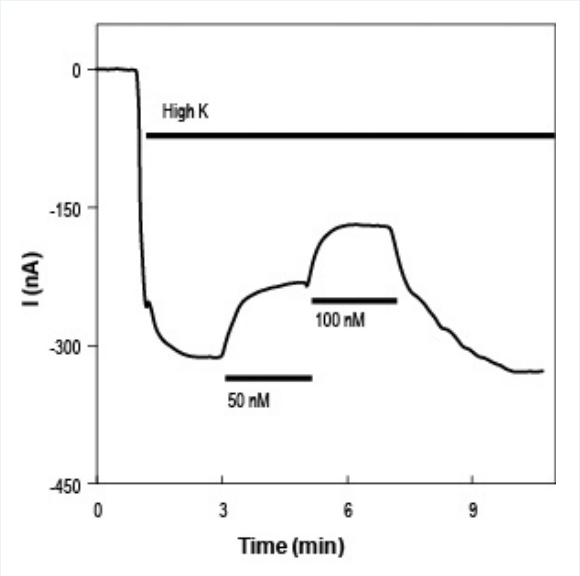
Fluorescent-Labeled Toxins

Name	Catalog #	Target	Applications	Type	MW	Activity	Purity
Agitoxin-2-Cys-TAMRA	RTA-420-T	Kv1.3 channel blocker	LCI, BA	RP	4673 Da.	50 pM - 10 nM	>98%
α-Bungarotoxin-ATTO Fluor-488	B-100-AG	α7, α1/β1/γ/δ nAChR, GABA(A) receptor	LCI, BA	NP	~9140 Da.	1 nM - 3 µM	>95%
α-Bungarotoxin-ATTO Fluor-633	B-100-FR	α7, α1/β1/γ/δ nAChR, GABA(A) receptor	LCI, BA	NP	~9140 Da.	1 nM - 3 µM	>95%
α-Bungarotoxin-FITC	B-100-F	α7, α1/β1/γ/δ nAChR, GABA(A) receptor	LCI, BA	NP	~8406 Da.	1 nM - 3 µM	>95%
α-Conotoxin Iml-ATTO Fluor-590	C-290-AR	α3/β2 nAChR	LCI, BA	SP	1924 Da.	1–2 µM	>95%
MmTx1 Toxin-ATTO Fluor-488	STM-550-AG	GABA(A) receptor (allosteric modulator)	LCI, BA	SP	~7775 Da.	200-400 nM	>99%
Stichodactyla Toxin-ATTO Fluor-590	STS-400-AR	Kv1.1, Kv1.3, Kv1.4, Kv1.6 channel blocker	LCI, BA	SP	~ 4627 Da.	1-100 nM	>99%
Tertiapin-Q-ATTO Fluor-488	STT-170-AG	Kir1.1, Kir3.2 channel blocker	LCI, BA	SP	3195.5 Da.	50-200 nM	>95%
Tertiapin-Q-ATTO Fluor-633	STT-170-FR	Kir1.1, Kir3.2 K+ channel blocker	LCI, BA	SP	3195.6 Da.	50-200 nM	>95%
Tityustoxin-Kα-ATTO Fluor-594	STT-360-AR	Kv1.2 channel blocker	LCI, BA	SP	~4900 Da.	0.5-50 nM	>98%

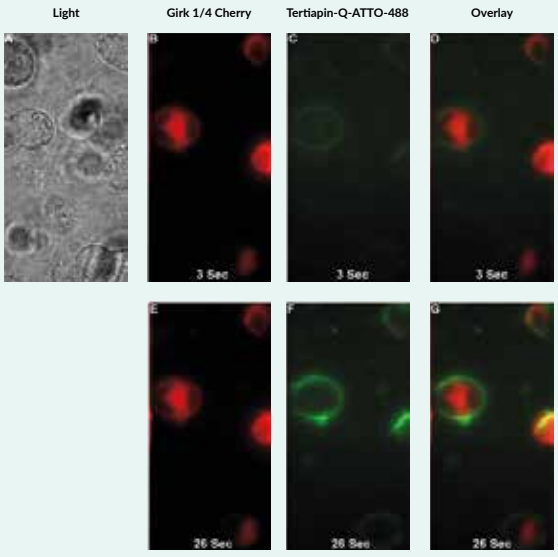


Product Highlight: Toxins

Tertiapin is a 21-residue peptide toxin that was originally isolated from European honey bee (*Apis mellifera*) venom. The toxin, and its more stable derivative Tertiapin-Q, block a range of inward rectifier K^+ channels (Kir), in particular ROMK1 (Kir1.1, IC50 = 2 nM) and GIRK (Kir3 family). Interestingly they have no effect on the Kir2 family member. In addition, Tertiapin has been shown to inhibit acetylcholine induced K^+ currents in mammalian cardiomyocytes. Our ATTO conjugated Tertiapin-Q product is a highly pure, synthetic, and biologically active conjugated peptide toxin. It shows assay dependent activity at a concentration range of 50-200 nM.



Tertiapin-Q-ATTO Fluor-488 inhibits Kir3.2 channels heterologously expressed in *Xenopus* oocytes.
A continuous current trace recorded at a holding potential of -80 mV. Kir3.2 currents are downward reflections activated by high K^+ containing solution. While activated, 50 nM and 100 nM of Tertiapin-Q-ATTO Fluor-488 (#STT-170-AG) were applied for 2 min (indicated as bars).



Tertiapin-Q-ATTO Fluor-488 binds GIRK1/4-Cherry transfected HEK293T cells
Transfected cells were incubated in the presence of 200 nM Tertiapin-Q-ATTO Fluor-488 (#STT-170-AG). The labeled toxin accumulates on the membrane surface after 26 sec. No binding is achieved in untransfected cells (data not shown).

Labeled Neurotrophins

The neurotrophins are a family of soluble, basic protein growth factors that regulate neuronal development, maintenance, survival and death in the CNS and the PNS. NGF, the first member of the family to be discovered, was originally purified as a factor supporting and regulating survival, development, function and plasticity of sympathetic and sensory spinal neurons. This effect was observed both *in vivo*, as well as *in vitro*. Our biotinylated neurotrophins provide useful research tools for live cell imaging and cell differentiation in culture.

Products:

Bioactive Labeled Neurotrophin Proteins

Name	Catalog #	Applications	Type	MW	Activity	Purity
H BDNF-Biotin	B-250-B	LCI, BA, Q-dot	RP	~ 28 kDa.	ED50 = 220 pM	>98%
H proBDNF-Biotin	B-256-B	LCI, BA, Q-dot	RP	~ 51 kDa.	0.1-10 nM	>98%
M NGF 2.5S-Biotin	N-240-B	LCI, BA, Q-dot	NP	~ 26 kDa. dimer	EC50 = 0.5 nM	>98%

Explorer kits - Extracellular Markers

Our individual Explorer Kits, contain a comprehensive set of screening antibodies used routinely to detect extracellular markers. We have relevant kits available for inflammatory membrane proteins and homeostatic microglia markers.

Products:

Explorer Kits for Extracellular Markers

Name	Catalog #	Description	Target	Reactivity
Inflammation Marker Ab kit	AK-605	17 x Inflammation Membrane Protein labeling Abs	P2X1R, P2X7, GPR65, BAI1, β2-Adrenergic, Calcium Sensing R, BLT1, C5aR1 CysLTR1, FPR2/ALX, HRH4, EP2/ PTGER2 + more	H,M,R
Microglial Marker Ab kit	AK-660	6 x Homeostatic Microglial Marker labeling Abs	CD39, EMR1 (ADGRE1), GPR34, CX3CR1, IBA1/AIF1, P2Y12	H,M,R

Protocols

Live Cell Flow Cytometry Using Conjugated Primary Antibodies (Direct)

Direct live cell flow cytometry uses a single antibody to detect the antigen of interest. This primary antibody is directly conjugated to a fluorophore, for example, FITC or PE.

Cell preparation/labeling:

1. Transfer 0.5-2 x 10^6 cells into a microtube. Centrifuge 5 min. at 300 x g. Discard supernatant.
2. Carefully resuspend the cell pellet with 20-100 µl ice-cold labeling buffer (PBS + 2% BSA + 0.05% NaN3).

Labeling:

3. Add fluorophore-conjugated primary antibody at the appropriate dilution in labeling buffer. Incubate on ice 30-60 min.
4. Wash the unbound antibody by filling the microtube with labeling buffer, centrifuge 5 min. at 300 x g and discard supernatant. Repeat twice.
5. Resuspend the cells with ice-cold labeling buffer. Keep on ice protected from light until analyzed with a flow cytometer.

Live Cell Flow Cytometry (Indirect)

Indirect live cell flow cytometry involves using two antibodies. The first, primary antibody recognizing the target antigen is unconjugated. The secondary antibody is used for detection. It binds the primary and is conjugated to a fluorophore.

Cell preparation/labeling:

1. Transfer 0.5-2 x 10^6 cells into a microtube. Centrifuge 5 min. at 300 x g. Discard supernatant.
2. Carefully resuspend the cell pellet with 20-100 µl ice-cold labeling buffer (PBS + 2% BSA + 0.05% NaN3).
3. Add primary antibody at the appropriate dilution in labeling buffer. Incubate on ice 30-60 min.
4. Wash the unbound antibody by filling the microtube with labeling buffer, centrifuge 5 min. at 300 x g and discard supernatant. Repeat twice.
5. Add fluorescently-labeled secondary antibody at the appropriate dilution in ice-cold labeling buffer. Incubate on ice protected from light 30-60 min.
6. Wash the unbound antibody by filling the microtube with labeling buffer, centrifuge 5 min. at 300 x g and discard supernatant. Repeat twice.
7. Resuspend the cells with ice-cold labeling buffer. Keep on ice protected from light until analyzed with a flow cytometer.

Immunocytochemistry for Live Cells

Cell preparation/labeling:

1. Plate cells in chosen chamber slides and grow 1-2 days in appropriate medium. Cells need to attach strongly to plate.
2. **IMPORTANT!** Some cell lines will need special coating i.e. poly-lysine of the chamber slides to aid in cell attachment. The specific type of coating needs to be determined empirically as it varies between chamber types and/or cell lines.
3. Wash cells 2-3 times with ice-cold assay buffer (PBS + 2% BSA + 0.05% NaN3).
4. Add primary antibody at the appropriate dilution in ice-cold assay buffer. Incubate 1 hr at 4°C.
5. Note: If using fluorescent labeled antibody, skip to step 6.
6. Wash cells 2-3 times with ice-cold assay buffer.
7. Add fluorescently-labeled secondary antibody at the appropriate dilution in ice-cold assay buffer and incubate 1 hr at 4°C protected from light.
8. Wash 3-5 times with assay buffer and drain well. Add buffer to cover cells and proceed to the microscope.

Key Abbreviations

Ab	Antibody	Mc	Monoclonal
BA	Bioassay	M	Mouse
C-T	C-Terminus	MW	Molecular Weight
DM	Domain	N-T	N-Terminus
EC	Extracellular	N	Neutralization
FC	Flow Cytometry	NP	Natural Protein
GP	Guinea Pig	Pc	Polyclonal
H	Human	Q-dot	Quantum Dot Labeling
ICC	Immunocytochemistry	Rb	Rabbit
IFC	Indirect flow cytometry	RP	Recombinant Protein
IF	Immunofluorescence	R	Rat
IHC	Immunohistochemistry	SP	Synthetic Peptide
IP	Immunoprecipitation	TM	Transmembrane
LCI	Live Cell Imaging	WB	Western Blotting

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